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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,936	01/11/2002	Michael Mulligan	P3010US01	9432
36671 7590 12/23/2010 DITTHAVONG MORI & STEINER, P.C. 918 Prince Street Alexandria, VA 22314				
EXAMINER DOAN, DUYEN MY				
ART UNIT		PAPER NUMBER		
2452				
NOTIFICATION DATE		DELIVERY MODE		
12/23/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket@dcpatent.com

### Office Action Summary

**Application No.**

10/043,936

**Applicant(s)**

MULLIGAN ET AL.

**Examiner**

DUYEN M. DOAN

**Art Unit**

2452

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 8-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 9/10/2010 have been fully considered but they are not persuasive.

In response to applicant's argument that the prior art does not teach, "loosely coupled interface...service provision infrastructure brokering value added service from one or more terminal to service provision infrastructure...the service provision infrastructure is for use by one or more terminals that host network enable applications" Examiner disagree, the wireless portal in Jiang interface with service provision infrastructure which in this case the ICPs. The wireless portal communicates the value added service such as the location information of the terminals to the ICPs (see Jiang col.10, lines 25-39). The service provision infrastructure (ICPs) provides services to the terminals which inherently hosts the service applications (i.e. network enable applications).

Jiang suggests using open interfaces without hardware and software restructuring (see Jiang col.6, lines 55-58). However Jiang is silent to whether this interface is loosely coupled interface (such as XML). Hertling cures the deficiency of Jiang by disclosing the concept of utilizing the service interface implements in XML. It is obvious based on KSR rationale to apply a well known element such as XML service interface to Jiang because it does not produce an unexpected results.

In response to applicant's argument with respect to the 101 rejection, the argument is persuasive, the 101 rejection is withdrawn.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1-6, 8-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites, "the service provision infrastructure is for use by one or more terminals that hosts network-enabled applications..." it is unclear to the examiner whether the service provision infrastructure hosts the applications or the terminal hosts the applications. For the purpose of examination, examiner interpret the the service provision infrastructure hosts the applications

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6,8-33,40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jiang et al (us pat 6,741,853) (hereinafter Jiang) and Hertling et al (us 2004/0205117) (hereinafter Hertling).

As regarding claim 1, Jiang discloses communicates with one or more terminals operable in a first type of network system, a network infrastructure comprising a plurality of network systems (see Jiang col.6, lines 41-64, and also see figure 2, figure 5, user terminals); a service provision infrastructure for use by one or more of the terminals that hosts network-enabled applications and is configured to interface with a second type of network system (see Jiang figure.2 ICP 250-260, also see figure.7, the portal interface with the ICP which hosts varieties of applications); and

at least one network service broker comprising at least one terminal-coupled broker to communicate directly with one or more terminals (see Jiang figure.2, figure.5, portal middle ware interface with terminals) to the service provision infrastructure for brokering added-value network services from one or more of the terminals and network systems to the service provision infrastructure (see Jiang col.7, lines 3-12, lines 43-58, col.8,lines 28-37, portal middle ware allows value added services integration between mobile device and service providers).

Jiang is silent in regard to a loosely-coupled interface.

The concept of using loosely-coupled interface is well known in the art. For instant Hertling discloses the concept of using loosely-coupled interface (see Hertling par 0005, 0012, service interface are defined in XML).

It would have been obvious to one with an ordinary skill in the art at the time the invention was made to incorporate the teaching of Hertling to Jiang because they're analogous art. A person would have been motivated to modify Jiang with Hertling's invention for the purpose of providing code reused, greater flexibility and ease of maintenance.

As regarding claim 2, Jiang-Hertling discloses wherein the loosely-coupled interface is a loosely-coupled standardized interface (see Hertling par 0005, 0012). The same motivation was utilized in claim 1 applied equally well to claim 2.

As regarding claim 3, Jiang-Hertling discloses wherein the loosely-coupled standardized interface is defined in Extensible Markup Language (XML) (see Hertling par 0005, 0012). The same motivation was utilized in claim 1 applied equally well to claim 3.

As regarding claim 4, Jiang-Hertling discloses wherein the loosely-coupled interface comprises a web services interface (see Hertling par 0005, 0012). The same motivation was utilized in claim 1 applied equally well to claim 4.

As regarding claim 5, Jiang-Hertling discloses wherein the loosely-coupled interface comprises a single loosely-coupled web service interface exposed to the

service provision infrastructure interface (see Hertling par 0005, 0012). The same motivation was utilized in claim 1 applied equally well to claim 5.

As regarding claim 6, Jiang-Hertling discloses wherein the network service broker comprises at least one network-coupled broker to communicate with one or more network elements in the network infrastructure (see Jiang col.7, lines 3-12, lines 43-58, col.8, lines 28-37, portal middle ware allows value added services integration between mobile device and service providers).

As regarding claim 8, Jiang-Hertling discloses wherein the network service broker comprises at least one hybrid network service broker to communicate with one or more network elements in the network infrastructure and with one or more terminals (see Jiang col.7, lines 3-12, lines 43-58, col.8, lines 28-37, portal middle ware allows value added services integration between mobile device and service providers).

As regarding claim 9, Jiang-Hertling discloses wherein the network service broker is an authentication broker to access authentication services for use by the network-enabled application (see Jiang col.7, lines 3-12, lines 43-58, col.8, lines 28-37, portal middle ware allows value added services integration between mobile device and service providers; col.9, lines 31-35, AAA server).

As regarding claim 10, Jiang-Hertling discloses wherein the network service broker is a charging broker to access a charging/billing service in connection with use of the network- enabled application (see Jiang col.7, lines 3-12, lines 43-58, col.8,lines 28-37, portal middle ware allows value added services integration between mobile device and service providers; col.9, lines 31-35, AAA server).

As regarding claim 11, Jiang-Hertling discloses wherein the network service broker is a location broker to access a terminal location service to allow a location of the terminal to be provided to the network-enabled application (see Jiang figure.5 location server).

As regarding claim 12, Jiang-Hertling discloses wherein the network service broker is a content ordering broker to store subscription information to a profile register and to verify subscription intentions of an end-user of the terminal (see Jiang figure.7 PMS 732).

As regarding claim 13, Jiang-Hertling discloses wherein the network service broker is a presence broker to access a presence service to allow user presence information to be provided to the network-enabled application (see Jiang figure.7, PMS)

As regarding claim 14, Jiang-Hertling discloses wherein the network service broker is a client provisioning broker to broker provisioning of mobile terminals (see Jiang figure.7).



As regarding claim 15, Jiang-Hertling discloses wherein the network service broker is a notification broker to facilitate pushing content to the terminals (see Jiang col.17, lines 39-67, pushing content).

As regarding claim 16, Jiang-Hertling discloses wherein the network service broker is a privacy broker to access end-user privacy information and to control which information other brokers will provide to the service provision infrastructure (see Jiang col.17, lines 39-67)

As regarding claim 17, Jiang-Hertling discloses wherein the privacy broker controls which information other brokers will provide to the service provision infrastructure based on parameters defined by an end-user of the terminal, wherein the parameters may be provided by the end-user manually at a time in which the end-user privacy information is required, or automatically where the parameters were defined by the end-user in advance (see Jiang col.12, lines 6-40).

As regarding claims 18-33,40 and 41, the limitations of claims 18-33,40 and 41 are similar to limitations of rejected claims 1-6,8-17 above, therefore rejected for the same rationale.

Claims 34-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jiang et al (us pat 6,741,853) (hereinafter Jiang) and Hertling et al (us 2004/0205117)

(hereinafter Hertling) and further in view of Tummala et al (us pat 6,915,345)  
(hereinafter Tumm).

Jiang and Hertling discloses limitations of claim 34 which are similar to limitations in claim 1. However Jiang-Hertling does not disclose providing a use authorization voucher to a visited network service broker associated with a visited network; receiving, at a service provision infrastructure, an address of the visited network service broker from a home network service broker associated with a home network of a terminal that has roamed to the visited network.

Tumm discloses providing a use authorization voucher to a visited network service broker associated with a visited network, receiving, at a service provision infrastructure, an address of the visited network service broker from a home network service broker associated with a home network of a terminal that has roamed to the visited network (see col.10, lines 4-14, lines 37-65, foreign AAA authenticate mobile device when the mobile device roaming from home to foreign network. See col.11, lines 21-38, using the certificate, encryption key).

It would have been obvious to one with an ordinary skill in the art at the time the invention was made to incorporate the teaching of Tumm to Jiang-Hertling because they're analogous art. A person would have been motivated to modify Jiang-Hertling with Tumm's teaching for the purpose of providing secure tunnel between the foreign network and the home network (see Tumm col.9, lines 35-40).

As regarding claim 35, Jiang-Hertling-Tumm discloses wherein providing the use authorization voucher to the visited network service broker comprises providing the use

authorization voucher to the service provision infrastructure via the loosely-coupled interface of the home network service broker, and in turn providing the use authorization voucher to the visited network service broker via the loosely-coupled interface of the visited network service broker (see col.10, lines 4-14, lines 37-65, foreign AAA authenticate mobile device when the mobile device roaming from home to foreign network. See col.11, lines 21-38, using the certificate, encryption key). The same motivation was utilized in claim 34 applied equally well to claim 35.

As regarding claim 36, Jiang-Hertling-Tumm discloses wherein providing the use authorization voucher to the visited network service broker comprises directly providing the use authorization voucher from the home network service broker to the visited network service broker (see col.10, lines 4-14, lines 37-65, foreign AAA authenticate mobile device when the mobile device roaming from home to foreign network. See col.11, lines 21-38, using the certificate, encryption key). The same motivation was utilized in claim 34 applied equally well to claim 36.

As regarding claim 37, Jiang-Hertling-Tumm discloses wherein providing a use authorization voucher to the visited network service broker comprises providing the use authorization voucher to the visited network if a roaming agreement between the home and visited networks authorizes providing the use authorization voucher to the visited network (see col.10, lines 4-14, lines 37-65, foreign AAA authenticate mobile device when the mobile device roaming from home to foreign network. See col.11, lines 21-38,

using the certificate, encryption key). The same motivation was utilized in claim 34 applied equally well to claim 37.

As regarding claim 38-39, the limitations of claims 38-39 are similar to limitations of rejected claims 34-37, therefore rejected for the same rationale.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUYEN M. DOAN whose telephone number is (571)272-4226. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thu V. Nguyen can be reached on (571) 272-6967. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DUYEN M DOAN/  
Primary Examiner, Art Unit 2452